

PATENT

AAT-106US

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A control device for electrical or electronic equipment, the device having processing means and non-volatile memory means, the non-volatile memory means having installed programs executable by the processing means directly from the non-volatile memory means, each program being made up of processing elements at least one of which can be modified or upgraded by the installation of a patch, wherein:
a part of the memory means is used as a patch registry containing a list of patch descriptor elements, and
the processing means is arranged to install a new patch by modifying the program processing element to which it relates and storing a patch descriptor element for the patch in the patch registry, each patch descriptor element containing a list of modified code descriptor elements identifying the processing element to which the patch has been applied.
2. (Previously Presented) A device as claimed in claim 1 in which the patch registry includes information relating to progress of the installation of the new patch.
3. (Previously Presented) A device as claimed in claim 1 or 2 in which the patch registry includes a list of unused program memory blocks for each processing element.
4. (Currently Amended) A device as claimed in claim 3 in which, on installation of [[a]] the new patch, unused program memory in the list is used to extend the patch registry to contain information relating to the new patch.
5. (Previously Presented) A device as claimed in claim 1 or 2 in which each patch descriptor element contains a text description of the patch configured to be presented to a user interface.
6. - 7. (Canceled).
8. (Currently Amended) A device as claimed in claim ~~7~~1 or 2 in which the modified code descriptor elements identify a start address of a faulty code block in the processing element.

PATENT

AAT-106US

9. (Currently Amended) A device as claimed in claim ~~7-1~~ or ~~2~~ in which the modified code descriptor elements identify a number of bytes of faulty code in the processing element being repaired by the patch.
10. (Currently Amended) A device as claimed in claim ~~7-1~~ or ~~2~~ in which the modified code descriptor elements include a start address of the memory area used for repaired code contained in the patch.
11. (Currently Amended) A device as claimed in claim ~~10-1~~ or ~~2~~ in which the modified code descriptor elements contain information in the form of binary flags describing how the repaired code contained in the patch was installed.
12. (Currently Amended) A method of modifying programs installed in a control device for electrical or electronic equipment, the control device having processing means and non-volatile memory means, the non-volatile memory means having installed programs executable by the processing means directly from the non-volatile memory means and each program being made up of processing elements, the method comprising:
- a) downloading to the control device a new patch from an external source containing code for modifying one of the program processing elements,
 - b) installing the new patch by modifying the one program processing element to which it relates in the non-volatile memory; and
 - c) storing a descriptor element for the new patch in a separate part of the non-volatile memory designated as patch registry, in which the patch descriptor element is configured to contain a list of modified code descriptor elements identifying the one program processing element to which the new patch has been applied.
13. (Currently Amended) A method as claimed in claim 12 including, during step b), the step of storing, in the patch registry, information relating to progress of the installation of [[a]] the new patch.
14. (Previously Presented) A method as claimed in claim 12 or 13 additionally comprising the step of storing in the patch registry a list of unused memory blocks for each of the processing elements.

PATENT

AAT-106US

15. (Currently Amended) A method as claimed in claim 14 in which, on installation of [[a]] the new patch, the patch registry is extended using unused memory and information relating to the new patch is stored in said unused memory added to the patch registry.

16. (Previously Presented) A method as claimed in claim 12 or 13 further including the step of configuring each patch descriptor element to contain a text description of the patch which is configured to be presented to a user interface.

17. - 18. (Canceled).

19. (Currently Amended) A method as claimed in claim ~~17~~12 or 13 in which the modified code descriptor elements are configured so as to identify a start address of a code block in the one processing element to be modified.

20. (Currently Amended) A method as claimed in claim ~~18~~12 or 13 in which the modified code descriptor elements identify respective numbers of bytes of code in the one processing element being modified by the patch.

21. (Currently Amended) A method as claimed in claim ~~18~~12 or 13, in which the modified code descriptor elements include a start address of a memory area used for the modified code contained in the patch.

22. (Currently Amended) A method as claimed in claim ~~18~~12 or 13 in which the modified code descriptor elements contain information in the form of binary flags describing how repaired code contained in the patch was installed.

23. (Currently Amended) A method as claimed in claim 12 or 13 in which step (b) comprises overwriting code in the one processing element with code contained in the patch.

24. (Currently Amended) A method as claimed in claim 12 or 13 in which step (b) comprises installing the patch code in a selected unused part of the non-volatile memory and diverting program flow to the selected part of the ~~non-volatile~~volatile memory and back again thereby bypassing code in the unmodified processing element.